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## Work and Quality of Life for Individuals with SMI: A Systematic Review

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# Work and Quality of Life for Individuals with SMI: A Systematic Review

by

Scott M. Grandt, B.A.

MSW Clinical Research Paper

Presented to the Faculty of the  
School of Social Work  
St. Catherine University and the University of St. Thomas  
St. Paul, Minnesota  
in Partial fulfillment of the Requirements for the Degree of

Master of Social Work

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The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.



### **Abstract**

This systematic review looks at the quality of life outcomes employment gives individuals with severe mental illnesses. Fourteen studies conducted between 1991 and 2016 were included for the final review. Studies that examined health and functioning generally found connections between work and improvements in both functioning and symptoms. Studies that investigated interpersonal aspects of quality of life found connections between work and the size of social networks, but also noted the dual nature work played regarding interpersonal relationships. Half of the studies discussed outcomes related to self-views, with some making the connection between work and identity formation and others noting the connection between work and self-esteem. Finally, studies that looked at how work affected participants' outlooks on life were mixed between whether they found a connection between work and life satisfaction. Limitations of this study and future suggestions for research are also discussed.

*Keywords:* severe mental illness, mental health, quality of life, work, employment

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## **Introduction**

Work is an important aspect of the human condition. Waddell and Burton (2006), in a review of literature commissioned by the United Kingdom's Department of Work and Pensions, observed a number of findings about the relationship between work and well-being. From an economic standpoint, they found that work is generally the most important method of obtaining resources required for full participation in modern society. From a psychosocial aspect, they found that work fulfills needs in societies in which employment is a norm, playing a large part in the formation of individual identity, social role, and social status. Furthermore, from a public health standpoint, they found that work and socio-economic status play an important part of physical health, mental health, and mortality.

Conversely, in the same study, Waddell and Burton (2006) also found a strong association between worklessness and poor health. Those who were unemployed were found to have higher mortality rates; have poorer general health (including long-standing illnesses); have poorer mental health (including increased psychological distress, and minor increases in psychological/psychiatric morbidity); and have higher levels of medical consultation, medication consumption, and hospital admission rates. Those who found re-employment generally found an increase in self-esteem, improved mental and physical health, and reduced psychological stress and psychiatric morbidity at a level comparable to the negative effects of job loss.

Given the importance of work and employment to health and quality of life, it is conspicuous that many at-risk populations have incredibly low employment rates. In 2012, only 17.8% of individuals with severe mental illness were employed (National Alliance on Mental Illness [NAMI], 2014). While there are supported employment programs designed to help these

individuals find jobs, in 2012 only 1.7% of individuals who were being served by state mental health systems nationwide were receiving these services (NAMI, 2014).

In order to better understand the importance of employment for individuals with severe mental illness in receiving an adequate amount of financial support, it is important to identify the particular benefits of employment for said population. Both in the United States and in Europe, research has been done to identify the quality of life benefits of work for individuals with severe mental illnesses. In this systematic review, the author will compile research on the effects of work on quality of life for individuals with severe mental illness. Before doing so, the author will introduce relevant definitions to this study, prevalence of mental illness, and some historical context regarding treatment of severe mental illness. This will be done to answer the study question: what quality of life outcomes does employment give to individuals with SMI?

### **Definitions Relevant to the Study**

**Mental Illness.** There are several terms used in the United States to define mental illness. At a very basic level, the federal government defines mental illness as “[a] mental, behavioral, or emotional disorder (excluding developmental and substance abuse disorders); [d]iagnosable currently or within the past year; and, [o]f sufficient duration to meet diagnostic criteria specified within the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV),” (National Institute of Mental Health [NIMH], n.d.a).

A *severe mental illness* (SMI) is defined by the US federal government as having the above criteria but with the addition that aspects of the illness must result in “serious functional impairment, which substantially interferes with or limits one or more major life activities” (NIMH, n.d.f). There are no specific mental disorders defined at the federal level, allowing for more flexibility at the state level, but disorders that are often considered SMIs include



schizophrenia, schizoaffective disorder, other psychotic disorders, major depressive disorders, bipolar disorders, and borderline personality disorder; anxiety disorders (including obsessive compulsive disorder and panic disorder) and eating disorders (including anorexia nervosa and bulimia nervosa) are also sometimes considered SMIs (Development Services Group, Inc, 2016).

Another commonly used term is *severe and persistent mental illness* (SPMI). This term is difficult to generalize as each state has its own very specific legal definition. For example, Minnesota defines that to have an SPMI one of the following must be the case for an individual: (a) the patient has had two or more instances of inpatient care for their mental illness in the last two years, (b) the patient has had continuous psychiatric hospitalization or residential treatment for a duration of more than six months within the last year, (c) the patient has been treated by a crisis team two or more times in the last two years, (d) the patient has had a diagnosis of schizophrenia, bipolar disorder, major depression, or borderline personality disorder and their mental health professional believes they will likely have future episodes unless services are provided, (e) the recipient has in the last three years been committed by a court as a mentally ill person under state law, or their commitment has been continued, (f) the recipient was eligible with the previous criteria but the specified time limit has expired, or (g) the recipient was eligible as a child with a severe emotional disturbance (Minnesota Department of Human Services, 2014). Despite the fact that term SPMI has a very specific definition, which can differ depending on where one resides, it is often used synonymously with the term SMI in practice and writing, particularly in regions where SPMI has not been formerly assigned a definition by the government.

**Quality of Life.** Quality of life is a difficult term to define. Awad (1999) states that the term is “deceptively simple and easy to understand yet complex and frequently elusive to define; i

t can mean different things to different people” (as cited in Corring & Cook, 2007, p 240). The term *quality of life* began to be popularly used in the West after the end of World War II, initially used in reference to material goods, such as a house, car, more and better appliances, and money to travel and retire (Farquhar, 1995). In the early 1960s, this broadened to include education, individualism, economic growth, health, and welfare (Farquhar, 1995). By the late 1960s, quality of life definitions changed again to emphasize more of the intangibles of life, such as “personal freedom, leisure, emotion, enjoyment, simplicity and personal caring,” meaning to reflect more than materialism (Farquhar, 1995, p. 1439).

Some effort has been made to measure quality of life specifically among those with SMI. The Lehman’s Quality of Life Interview (QOLI) identified aspects of quality of life that included family and social relations, safety, employment, and finances (Lehman, 1996). The Lancashire Quality of Life Profile (LQLP) attempted to improve upon this measure by including objective and subjective measures and forming different life “domains” such as “well-being” and “life satisfaction” (Gaite et al., 2000). While the LQLP has been shown to be reliable and valid, it does have shortcomings including the length of time it takes to administer, and the number of items found to be not relevant to discriminating between samples or change over time (Björkman & Svensson, 2005). The Manchester Short Assessment of Quality of Life (MANSA) was developed as a shortened and modified version of the LQLP by excluding objective life conditions and limiting subjective assessments to one item per domain. This measure has been shown to have good internal consistency and to correlate with results from LQLP (Björkman & Svensson, 2005). Other measures have been developed to allow for individuals with SMI to define and describe their own measures of quality of life, such as the Schedule for the Evaluation of Individual Quality of Life (SEIQoL) (Prince & Gerber, 2001).

Another aspect to keep in mind is that many consider quality of life to be a fully subjective experience, and that as such it can only be measured by self-report (Corring & Cook, 2007).

Corring and Cook (2007), in a qualitative research study involving 18 individual interviews and 35 individuals in focus groups explored the quality of life construct from the perspective of individuals with SMI, finding four common domains of experience of the illness, relationships, occupation, and sense of self.

### **Prevalence of Mental Illness in America**

Mental illness is fairly common within the United States. In 2014 it was estimated by the NIMH that 43.6 million adults 18 or older were suffering from a mental illness, representing approximately 18.1% or almost one in five of all U.S. adults (NIMH, n.d.a). The same year it was estimated that 9.8 million of these individuals, representing 4.2% of all U.S. adults or almost one in twenty, were living with severe mental illness (NIMH, n.d.f). Regarding specific diagnoses, the NIMH further reported that approximately 1.1% of U.S. adults are diagnosed with schizophrenia (NIMH, n.d.e). Approximately 2.6% of U.S. adults are diagnosed with bipolar disorder, with 82.9% of those cases (or 2.2% of U.S. adults) classified as “severe” (NIMH, n.d.b). Furthermore, in 2015 it was estimated that 16.1 million adults (or 6.7% of the U.S. adult population) had a major depressive episode (NIMH, n.d.c), with 10.3 million (4.3% of the U.S. adult population) of those cases causing “severe impairment” (NIMH, n.d.d). Globally, it is estimated that 350 million people are affected by depression, 60 million people are affected by bipolar disorder, and 21 million people are affected by schizophrenia and other psychotic disorders (World Health Organization, 2016).

## **Historical Treatment**

In 1410, the first psychiatric hospital in the world, the “Hospital de los Inocentes” (Hospital of the Innocents), was founded in Valencia, Spain (López-Ibor, 2008). The example of this hospital led to the founding of many other mental institutions throughout Spain (a total of 11 by 1567), and the founding of many others throughout Europe (López-Ibor, 2008). In the 1600s, Europe increasingly isolated mentally ill individuals, grouping them together with vagrants, delinquents, and handicapped individuals (PBS Online, n.d.). While major reform of the treatment of the mentally ill began in Europe in the late 1700s (PBS Online, n.d.), reform in the United States did not begin until the mid-1800s.

In 1841, Dorothea Dix, a schoolteacher in Massachusetts, volunteered to teach Sunday school courses to female convicts in East Cambridge (Parry, 2006). During these visits, Dix came into contact with a number of individuals with mental illnesses who were treated both inhumanely and neglectfully. Stirred by these conditions, Dix worked to reform the treatment of the mentally ill. Starting with her “Memorial to the Legislature of Massachusetts” in which she requested for an expansion of the state insane asylum (Dix, 1843), Dix continued to lobby for the establishment of 32 state hospitals over a period of 40 years (PBS Online, n.d.).

## **Deinstitutionalization**

After World War II, there began a shift in public opinion towards these state-run institutions. Many mental hospitals and state-run health care facilities found themselves overcrowded, exacerbating already harsh conditions (French, 1987). In 1952, the psychotropic drug chlorpromazine was discovered, leading to its approval by the FDA in 1954 and commercialization under the name Thorazine (Gronfein, 1985). Soon the use of these drugs became practically indispensable, in particular as the “drugs produced compliant patients and

also had the advantage of being easily used in extramural settings” (Gronfein, 1984, p. 444).”

Furthermore, an influx of literature promoting community care instead of institutional care and a president supportive of mental health care reform led to a shift in public opinion toward state hospitals, resulting in the passing of the Community Mental Health Care acts in 1963 and 1965 (Karger & Stoesz, 2014). These shifted funding toward local mental health centers, beginning the process of deinstitutionalization.

Unfortunately, while in theory these policies were meant to increase the standards of living for mental health care patients, they have also caused a number of problems.

Deinstitutionalization has caused a chronic shortness of inpatient mental health beds in the United States, as many states did not build the suggested number of community-based mental health centers. In 2005, it was reported there were only 17 public psychiatric beds per 100,000 population, compared to 340 psychiatric beds per 100,000 population in 1955 (Torrey, Entsminger, Geller, Stanley, & Jaffe, 2008). This low supply of inpatient mental health care options has led to waiting lists for individuals to receive care.

Deinstitutionalization appears to be connected to the issue of homelessness in the United States. Since deinstitutionalization, it has been shown that the homeless population has grown, among which there is a high percentage of individuals with mental illness. It has been estimated that between a quarter and a half of this population show strong psychiatric symptoms (Mechanic & Rochefort, 1990). Research suggests that high levels of homelessness can be linked to low state psychiatric hospital capacity (Markowitz, 2006). This is strongly evidenced in the state of Minnesota by the 2012 Minnesota Homelessness study which found that 55% of homeless adults in Minnesota reported a significant mental illness (Wilder Research, 2013). This can be generalized to roughly 4,500 homeless individuals who were not receiving mental health

treatment (Direct Care and Treatment and Chemical and Mental Health Services Administrations [DCT & CMHS], 2014).

Furthermore, there is evidence suggesting that deinstitutionalization may have unintentionally led to the criminalization of the mentally ill. The phenomenon of transinstitutionalization suggests that due to deinstitutionalization, thousands of individuals are no longer able to access treatment for their mental illness, and as such find their symptoms have deteriorated so far they get arrested and prosecuted for crimes they may not have committed had they been able to access the treatment they needed (Human Rights Watch, 2003). A study by James and Glaze (2006) found that in the United States, 64% of local jail inmates, 56% of state prison inmates, and 45% of federal prison inmates present with symptoms of SMIs, with similar trends in Canada and the United Kingdom. Prins (2011) described two main reasons why deinstitutionalization may be a factor for this criminalization. First, deinstitutionalization reduced the capacity for the mental health system to provide both immediate and long-term care for individuals with SMI. Second, though community-based interventions have been shown to be effective for some individuals with SMI, they are not capable of treating everyone with SMI in community settings.

### **Employment for Individuals with SMI**

Since deinstitutionalization, employment has been a method of treatment that has been explored for individuals with SMI. Logically, it seems as though employment should solve some of the aforementioned problems of deinstitutionalization by providing pay for housing and activities to keep one out of criminal activity. One of the early post-deinstitutionalization methods of employing individuals with SMI was the use of *sheltered workshops*, which are defined by the United States Office of Social Security as institutions that provide “employment

opportunities for individuals who are developmentally, physically, or mentally impaired, to prepare for gainful work in the general economy” (Social Security, 2012). By the mid-1970s, however, there was much criticism of this mode of employment: many individuals did not transition to full *competitive employment* (defined at the time as work that averages to at least 20 hours per week each pay period), and training was found to be at best “supervision with vague instructions and occasional prompts to stay on task” rather than providing knowledge or skills helpful to move to competitive employment (Rusch, 1990, p.6).

In the mid-1970s, *supported employment* programs emerged as an alternative route to competitive employment. These programs supported a “place-train-maintain” employment model, often using basic behavioral concepts to support vocational training and competitive employment (Rusch, 1990, p.7). Supported employment programs differ particularly from sheltered workshops in that employees are expected to directly contribute to the workforce and be able to learn and adapt to the expectations of their employers (Rusch, 1990). In 1984, the Developmental Disabilities act shifted the focus of supported employment to integration at competitive job sites with non-disabled individuals. This brought in to focus *integrated work settings* in which (1) most workers do not have a disability and (2) those who do have disabilities are not in work groups solely composed of those who also have disabilities (Rusch, 1990).

## **Methods**

### **Research Purpose**

The purpose of this systematic literature review was to explore the question: What quality of life outcomes does employment give to individuals with SMI?

For the purpose of clarity, the author will be using the term Severe Mental Illness (SMI) instead of Severe and Persistent Mental Illness (SPMI). Additionally, SMI will be taken to include the

disorders of schizophrenia, schizoaffective disorder, psychotic disorders, major depressive disorders, bipolar disorders, borderline personality disorder, and anxiety. This is not to say that eating disorders should not be considered SMIs, but that their treatment generally differs from the previous disorders.

This review looks at the use of employment as a treatment for mental illness. As the definition of quality of life can differ greatly depending on the context, this study considered different quality of life indicators including self-esteem, number of community contacts, self-rating of quality of life, and formal quality of life measures. Furthermore, different methods of employment including competitive, part-time, sheltered, and supportive employment were reviewed. Some consideration was put toward comparing quality of life outcomes among different employment types, but the main focus of this review was to look at what outcomes there were for employment specifically.

### **Type of Studies**

To answer the question of what non-vocational quality of life outcomes there are for individuals with SMI who are employed, only empirically based, qualitative, and quantitative studies were included. Case studies were excluded given the limitations of generalizing a single subject to a greater population.

### **Search Overview**

A preliminary search of academic journals including SocINDEX, PsychINFO, and Google Scholar found no systematic literature reviews concerning the question of what quality of life outcomes there are for individuals with SMI who are employed. One narrative review of literature from 2013 was found. However, given that narrative literature reviews (1) are not



replicable, (2) do not answer specific questions, and (3) do not critically evaluate their results, it was deemed that a systematic review of literature was still appropriate for the topic.

### **Review Protocol**

This review considered peer-reviewed, full-text articles from the past 25 years (since 1991). Articles were found within the databases SocINDEX and PsycINFO and were searched and collected on October 2nd, 2016.

### **Inclusion Criteria**

This systematic review includes research studies regarding employment of individuals with SMI in relation to measures of quality of life. The subjects of these studies would specifically include employed individuals over the age of 18, preferably where employment was viewed as a “treatment.” The particular measures of quality of life were not defined, though the research studied needed to include quality of life measurements beyond vocational outcomes. Only articles in English that were peer reviewed and from academic journals were included.

### **Exclusion Criteria**

In order to keep articles relevant, several exclusion criteria were identified. Regarding the criteria of SMI, articles in which the majority of the subjects suffered from diagnoses different from those defined above were excluded, such as “common mental illnesses” and “minor depressive disorder.” Articles that focused on non-work occupations or on job prep programs in which individuals were not yet employed were excluded to ensure the study reflected work as a treatment. Similarly, studies focusing on individuals seeking work but who were not yet employed were also excluded. Studies that acknowledged work as part of treatment but did not analyze this as part of their findings were excluded as well. Regarding the focus on quality of life, the following topics were excluded: studies focusing on outcomes of “job

satisfaction;” studies focusing on outcomes of dollars earned; studies in which activities were rated in terms of their significance but which did not indicate how quality of life was affected; and studies in which quality of life was addressed but not in relationship to employment status. Finally, in situations in which multiple studies used the same dataset only one study was selected.

### **Search Strategy**

A total of five searches were made within the databases. The first was a nested search, intending to include as many relevant search terms as possible, and utilized the “Subject Terms” function within the SocINDEX database. A primary search was performed using the subject terms “MENTAL illness,” “SCHIZOPHRENIA,” “MENTALLY ill,” “PSYCHOSES,” “BIPOLAR disorder,” “MENTAL depression,” and “PEOPLE with bipolar disorder,” using the Boolean search operator OR between each term. This primary search brought up 19,988 articles. The next part of this search was then performed within the same database using the subject terms “PART-time employment,” “TEMPORARY employment,” “PEOPLE with disabilities – Employment,” “FULL-time employment,” “SUPPORTED employment,” “MENTALLY ill – Employment,” “CONTRACT employment,” “SHELTERED workshops,” and “VOCATIONAL rehabilitation,” again using the Boolean search operator OR between each term. This search found 2,044 articles. These two searches were combined into one master search using all of the terms from the first search with all of the terms from the second search with the Boolean search operator AND between them. This process found 101 articles. Limitations were set within the search results to narrow down the article list, starting with the option for only Scholarly – peer reviewed articles (81 articles), then limiting to Academic Journals (64 articles), then limiting

articles to only those in English (61 articles). After reviewing the titles and abstracts of the remaining articles, no relevant articles were found.

The second search attempted to broaden the search by lessening the complexity. In this attempt a search was made with the terms (Occupations) AND ((Mental) AND (Illness)). From this search, 174 Scholarly – peer reviewed articles were found. Limitations of Academic Journals (143 articles), English language (138 articles), and Publication date from 1991-present (85 articles) were set before the article titles and abstracts were manually scanned. Utilizing the above inclusion and exclusion criteria, ten articles were found.

A third search was made using slightly different search terms of ((Mental) AND (Illness)) AND ((Vocational) AND (Rehabilitation)). This search found 137 Scholarly – peer reviewed articles, which were then limited by Academic Journals (100 articles), English language (99 articles), and publication dates from 1991-present (75 articles). At this point, the titles and abstracts of the articles were scanned, and three articles were found.

A fourth search was made in the PsycINFO database utilizing the search terms from the second search. The search filters for this database differed slightly from the SocINDEX database search filters, so the initial search was made with the limitations of publication dates of 1991-2016 and peer-reviewed journals. This search found 205 articles, which was then limited by the filter of Age Group – Adulthood (18 yrs & older), which left 162 articles. The titles and abstract of these remaining articles were then scanned, and seven articles were found.

The last search was also made in the APA PsycINFO database utilizing the same search terms from the third search. Again, the initial search of these terms limited for publication dates of 1991-2016 and peer-reviewed journals. This search found 920 articles, which were then filtered using Age Group Adulthood (611 articles), Population Group Human (609 articles), and

Index Term Quality of Life (106 articles). From this final group, the titles and abstracts were scanned and 11 articles were deemed possible for inclusion.

A total of 33 articles met the inclusion and exclusion criteria. After an additional screening, 18 articles were eliminated due to inclusion and exclusion criteria. One article was excluded due to technical restrictions, as a full-text version could not be located via the Interlibrary Loan Services. This left a total of 14 articles for review. Table 1 lists the articles that were included in this systematic review. Figure 1 illustrates how this process ensued.

*Table 1: Articles Included in the Systematic Review*

Database	Search No.	Title	Author(s)
SocINDEX	2	Benefits and drawbacks of employment: perspectives of people with mental illness	Honey, A. (2004)
	3	Does competitive employment improve nonvocational outcomes for people with severe mental illness?	Bond, G., Resnick, S., Drake, R., Haiyi, X., McHugo, G., Bebout, R. (2001)
	3	The role of work in the recovery of persons with psychiatric disabilities	Provencher, H., Gregg, R., Crawford, S., Mueser, K. (2002)
PsycINFO	4	The importance of work as compared to other forms of daily occupations for wellbeing and functioning among persons with long-term mental illness	Eklund, M., Hansson, L., Ahlqvist, C.(2004)
	4	Without occupation you don't exist: Occupational engagement and mental illness.	Blank, A., Harries, P., Reynolds, F. (2015)
	4	Occupation, social support and quality of life in persons with schizophrenic or affective disorders	Rüesch, P., Graf, J., Meyer, P., Rössler, W., Hell, D.
	5	The relationship between employment status and quality of life for individuals with severe and persistent mental illness	Vanden Boom, D., Lustig, D. (1997)
	5	Long-term effectiveness of supported employment: 5-year follow-up trial of a randomized controlled trial	Hoffmann, H., Jäckel, D., Glauser, S., Mueser, K., Kupper, Z. (2014)
	5	Rehabilitation programmes and quality of life in severe mental illness	Browne, S. (1999)
	5	The meaning and importance of employment to people in recovery from serious mental illness: results of a qualitative study	Dunn, E., Wewiorski, N., Rogers, E. (2008)
	5	Work and nonvocational domains of functioning in persons with severe mental illness: A longitudinal analysis	Mueser, K., Becker, D., Torrey, W., Xie, H., Bond, G., Drake, R., Dain, B. (1997)
	5	Supported employment and the quality of life: Does a job make a difference?	Fabian, E. (1992)
	5	Vocational rehabilitation for subjects with severe mental illnesses in Germany: A controlled study	Watzke, S., Galvao, A. Brieger, P. (2008)
	5	A prospective investigation of work and nonvocational outcomes in adults with severe mental illness.	Kukla, M., Bond, G., Xie, H (2012)

### Synthesis

The purpose of this systematic literature review was to explore the question: What quality of life outcomes does employment give to individuals with SMI? Using the databases SocINDEX and PsycINFO, and utilizing the inclusion and exclusion criteria laid out above, 14 articles met the criteria and were reviewed. Of the 14 articles included in this study, eight (57%) primarily examined the relationship between quality of life and work. Two articles (14%) addressed quality of life as a secondary purpose, and four (29%) discussed quality of life as a result of research based in grounded theory.

Half of the studies included in this systematic review (50%, n=7) included participants in competitive employment. Two (14%) studies included participants involved with sheltered employment, while six (43%) studies included participants involved with either supported employment or some sort of vocational rehabilitation program. Ten (71%) of the studies included individuals who were not employed at all for comparison. Most of the studies included more than one type of employment in addition to those unemployed. All of the articles included individuals diagnosed with a Severe Mental Illness as defined by this study.

Figure 1. Flow Chart of Article Selection



The majority of the research included in this review was quantitative research via structured interviews (n=10, 71%). Four (29%) of the included studies included qualitative

information. As mentioned earlier, no case studies were included in this review. Table 2 contains an overview of the included articles.

### **Quality Assessment**

Quality of data is important when examining, analyzing, and reporting findings. The following quality assessment tool was used to determine the quality of each article that met the above inclusion criteria. For each of the following criteria, the article was rated as: Y – item addressed; N – item not addressed; P – item partially addressed; NS – item not stated; or NA – item not applicable. The quality criteria used for both qualitative and quantitative studies, based on the criteria developed by Kizaur (2016), were as follows:

- Was the purpose of the study discussed?
- Was the sampling strategy clearly stated?
- Were the methods of data collection clearly stated?
- Are the diagnoses clearly stated?
- Can the results be generalized?

The 14 articles identified for this systematic review had mostly moderate to high quality, with one article being identified as poor, as determined by this quality assessment. Table 3 illustrates the results of this quality assessment.



*Table 2: Article Overview*

Article	Method	Diagnoses	Location	Sample Size	Synopsis
Blank, Harries, & Reynolds, 2015	Qualitative	“Mental health problems including psychosis”	United Kingdom	10	Looked to determine what the meaning of work was for people with SMI. Two themes were identified: identity and belonging.
Bond et al., 2001	Quantitative (Structured Interview, Secondary Data Analysis)	Schizophrenia spectrum, bipolar spectrum, depressive disorders, other axis I	Washington, DC, United States	149	Examined the different effects of sheltered and competitive work on nonvocational outcomes. Found that those in competitive work showed more improvement in symptoms, satisfaction, and self-esteem than those in minimal or no work. No such connection was found with sheltered work.
Browne, 1999	Quantitative (Structured Interview)	Schizophrenia (DSM III-R criteria)	Ireland	95	Outlined two “naturalistic” studies to evaluate the benefits of a supported employment program. Found these programs provide benefits to global well-being.
Dunn, Wewiorski, & Rogers, 2008	Qualitative	Schizophrenia spectrum, bipolar, major depression, co-existing substance abuse, co-existing trauma-related disorder, serious medical condition	United States	23	Looked to determine how individuals with SMI perceive work and its effect on their recovery. Two themes emerged: work has personal meaning, and work promotes recovery.
Eklund, Hansson, & Ahlqvist, 2004	Quantitative (Structured Interview)	Organic mental disorder, schizophrenia, schizotypal, delusional, mood disorder, neurotic, stress-related, somatic, personality disorder, psychological development,	Sweden	103	Investigated the importance of competitive work as compared to other forms of daily occupations. Found that those who worked were more satisfied with their occupations and had better functioning than other groups. Groups

		social functioning			did not differ on health and well-being.
Fabian, 1992	Quantitative (Structured Interview)	“Severe mental illness”	Maryland, United States	110	Study intended to determine if supported employment affected perceptions of life satisfaction, and if there is a relationship between job tenure and quality of life. Found that employment tenure is associated with higher quality of life.
Hoffmann, Jäckel, Glauser, Mueser, & Kupper, 2014	Quantitative (Structured Interview with Randomized Control)	Schizophrenia, affective disorder, other	Bern, Switzerland	100	Looked at the long-term effects of supported employment. Found that those in supported employment had significantly fewer psychiatric hospital admissions and days in the hospital, and that self-rated quality of life improved non-significantly.
Honey, 2004	Qualitative	Schizophrenia, bipolar, depression, drug-induced psychosis	Sydney, Australia	41	Sought to clarify the nature of benefits and drawbacks of employment from the perspective of those with SMI. Found benefits and drawbacks in six domains and that these factors are dynamic over time.
Kukla, Bond, & Xie, 2012	Quantitative (Structured Interview, Secondary Data Analysis)	Schizophrenia, affective disorders, other	United States	187	Examined the cumulative effects of types of work on non-vocational outcomes: symptoms, hospitalizations, quality of life, and social networks. Found that those in steady competitive work had fewer total symptoms and positive symptoms at baseline, that there was no significant difference in quality of life, and that there was a significant difference in social networking between steady-non/-competitive and those not working.

Mueser et al., 1997	Quantitative (Structured Interview)	Schizophrenia, schizoaffective disorder, delusional disorder, other psychotic, bipolar, major depression, dysthymia, anxiety, personality disorder (DSM III-R criteria)	New Hampshire, United States	143	Examined the relationship between employment status and non-vocational outcomes among those with severe mental illness who were receiving employment services. Found that those who were formerly unemployed who obtained competitive employment while participating in a vocational rehabilitation program had lower symptoms, better overall functioning, and higher self-esteem when controlled for baseline.
Provencher, Gregg, Crawford, & Mueser, 2002	Qualitative	Schizophrenia, schizoaffective, bipolar, depression, PTSD	New Hampshire, United States	14	Explored the role of work in the recovery of employed and unemployed individuals with SMI. Found three profiles: recovery is uncertain, recovery is self-empowering, and recovery is a challenge.
Rüesch, Graf, Meyer, Rössler, & Hell, 2004	Quantitative (Structured Interview)	Schizophrenia, schizotypal, delusional, affective disorder	Zurich, Switzerland	261	Looked to determine what kind of work individuals with SMI were doing, how this affects their quality of life, whether the occupation is related to subjective quality of life, and how much of a relationship there is between subjective and objective qualities of life. Found that type of occupation is linked significantly to objective quality of life, that those with competitive employment are most likely to have frequent regular contact with other persons (controlling for partners), and that occupation was related to physical well-being, social relationships, and

					environment.
Vanden Boom & Lustig, 1997	Quantitative (Structured Interview)	Schizophrenia, schizoaffective, bipolar, major depressive disorder	Madison, United States	40	Compared individuals in the Program for Assertive Community Treatment (PACT) vocational rehabilitation program against those unemployed regarding subjective Quality of Life. A large effect size was found for assessment of global quality of life between those employed and unemployed.
Watzke, Galvao, & Brieger, 2008	Quantitative (Structured Interview)	Substance abuse, schizophrenia or schizoaffective disorder, unipolar affective disorders, bipolar affective, anxiety or OCD, somatoform or eating disorder, severe stress or adjustment disorder, severe personality disorder	Halle and Saale, Germany	223	Examined the outcomes of standard vocational rehabilitation—primarily employment status, but also subjective well-being, symptoms, and general levels of functioning. Found that traditional vocational rehabilitation had a positive effect on level of functioning and psychological well-being.

*Table 3: Quality Assessment Checklist*

Article	Purpose of the study discussed	Sampling strategy clearly stated	Methods of collection clearly stated	Diagnoses are clearly stated	Results can be generalized
Blank, Harries, & Reynolds, 2015	Y	P	Y	P	P
Bond et al., 2001	Y	Y	P	Y	Y
Browne, 1999	P	N	P	Y	P
Dunn, Wewiorski, & Rogers, 2008	Y	Y	Y	Y	Y
Eklund, Hansson, & Ahlqvist, 2004	Y	Y	Y	Y	Y
Fabian, 1992	Y	Y	Y	P	P
Hoffmann, Jäckel, Glauser, Mueser, & Kupper, 2014	Y	Y	Y	Y	Y
Honey, 2004	Y	Y	Y	Y	Y
Kukla, Bond, & Xie, 2012	Y	Y	Y	Y	P
Mueser et al., 1997	Y	Y	P	Y	Y
Provencher, Gregg, Crawford, & Mueser, 2002	Y	P	Y	Y	Y
Rüesch, Graf, Meyer, Rössler, & Hell, 2004	Y	Y	Y	Y	Y
Vanden Boom & Lustig, 1997	Y	Y	Y	Y	P
Watzke, Galvao, & Brieger, 2008	Y	Y	Y	Y	Y

## Thematic Analysis

Through an analysis of the literature, four themes developed regarding what effects employment has on quality of life for individuals with SMI. These themes include: 1) health and functioning; 2) interpersonal quality of life; 3) self-views; and 4) outlook on life.

**Health and Functioning.** Seven studies (50%) in this review examined quality of life aspects relating to health and functioning for individuals (Bond et al., 2001; Browne, 1999; Eklund, Hansson, & Ahlqvist, 2004; Hoffmann, Jäckel, Glauser, Mueser, & Kupper, 2014; Kukla, Bond, & Xie, 2012; Mueser et al., 1997; Watzke, Galvao, & Brieger, 2008). The primary way this theme was examined was by looking at how work affected symptoms in individuals with SMI. For example, the earliest of these studies, Mueser et al. (1997), looked at 143 individuals with SMI living in two cities in New Hampshire, either involved in two different models of vocational rehabilitation (one using a supported employment model and the other using a model based in training prevocational skills), or in an unemployed control group. To look at the effect these programs had on symptoms, the researchers used an expanded version of the Brief Psychiatric Rating Scale (BPRS) (Lukoff, Liberman, & Nuechterlein, 1986), specifically focusing on thought disorder, affect, activation, disorganization, and anergia. Mueser et al. (1997) found that formerly unemployed patients who obtained competitive employment (defined as “either part or full-time employment in an integrated work setting, paying competitive wages”) tended to have lower symptoms, particularly symptoms of thought disorder and affect (p.420).

Bond et al. (2001) partially replicated the analysis of Mueser et al. (1997) with a secondary data analysis of a randomized study of supported employment in Washington, DC. Participants were similarly involved in a supported employment model, but the control in this

study was a traditional vocational rehabilitation program. Also using the BPRS, Bond et al. (2001) found that those in extended employment had a reduction of symptoms, even when controlling for baseline symptoms.

Three studies examined symptoms using the Positive and Negative Syndrome Scale (PANSS) (Kay, Fiszbein, & Opfer, 1987), a measure that provides a balanced representation of both positive and negative symptoms and examines their relationship to each other and to other aspects of an individual's global psychopathology. Watzke, Galvao, and Brieger (2008) used this scale to compare individuals in vocational programs in Halle, Germany. Individuals in two different programs, one a standard vocational rehabilitation program and the other a program focused on integrating participants into full-time competitive employment (defined as work over 20 working hours a week), were compared to a control group that did not have targeted treatment. Information was taken at intake, termination, and at a nine-month follow-up date. Watzke, Galvao, and Brieger (2008) found that the individuals in the rehabilitative groups had a statistically significant reduction in symptoms at termination, though not at the nine-month follow-up. Watzke, Galvao, and Brieger (2008) also found the total function of their rehabilitative group improved significantly over their control group at both termination and follow-up interviews via the Level of Functioning Scale (LOF) (Strauss & Carpenter, 1974), a scale that looks at work, symptomology, social relations, and hospitalization.

Two studies used the PANSS measure in conjunction with tracking the number of psychiatric hospital admission. Kukla, Bond, and Xie (2012) performed a secondary data analysis of a randomized control trial between two vocational models at an urban psychiatric rehabilitation agency in the United States—the individual placement and support model of supported employment and a stepwise modal of vocational services—over a two-year period.

Hoffmann, Jäckel, Glauser, Mueser, and Kupper (2014) compared individuals in a supported employment program with individuals in traditional vocational rehabilitation in Bern, Switzerland. Information was taken at intake and then in follow-up interviews one, two, and five years later. Both studies found work had an impact on hospital admissions: Hoffmann, Jäckel, Glauser, Mueser, and Kupper (2014) found that the supported employment group had significantly fewer visits, while Kukla, Bond, and Xie (2012) found that all of their “working” groups had significantly fewer hospitalizations compared to their “no work” group. Kukla, Bond, and Xie (2012) furthermore found that their “steady competitive work” group consisting of individuals who worked primarily in competitive jobs (defined as employment within an integrated setting) had fewer total symptoms at baseline and had a significant improvement in negative symptoms compared to the “no work” group.

Browne (1999) examined schizophrenia symptoms among individuals in an occupational therapy group in Ireland using the Quality of Life Scale (QLS) (Heinrichs, Hanlon, & Carpenter, 1984), a measure primarily designed to assess deficit symptoms, and the Scales for the Assessment of Negative Symptoms (SANS) and Positive Symptoms (SAPS) (Andreasen, 1990). Brown (1999) found significant improvements on the QLS subscales, and significant decreases in both positive and negative symptoms per the SANS and SAPS over a total of 17 weeks of the program. The only exception found was that there was not a similar improvement in individuals with “first episode” or “other” type schizophrenia.

One study (7%) did not find employment made a difference with symptoms. Eklund, Hansson, and Ahlqvist, (2004) compared individuals at an outpatient unit in Sweden. Individuals were broken up into three groups: one composed of individuals who were working competitively (which was not operationally defined) or in a regular amount of school, one in



which individuals were not working but were involved in community-based activities, and one in which individuals had no regular daily activity. Symptoms were examined using the BPRS, along with general health using the MOS 36-item short form health survey (Ware & Sherbourne, 1992), which provides a self-estimate of health. Eklund, Hansson, and Ahlqvist (2004) found no statistical difference between groups in regard to health or symptoms.

**Interpersonal Quality of Life.** Five of the studies (36%) (Blank, Harries, & Reynolds, 2015; Honey, 2004; Kukla, Bond, & Xie, 2012; Provencher, Gregg, Crawford, & Mueser, 2002; and Rüesch, Graf, Meyer, Rössler, & Hell, 2004) discussed belonging and interpersonal interaction as an aspect of quality of life. Three of the studies addressed this qualitatively. Provencher, Gregg, Crawford, and Mueser (2002) interviewed 14 individuals from either community mental health centers or peer support centers, all located in New Hampshire, concerning their experience with mental health recovery. From these interviews, three profiles were established: 1) those where recovery was uncertain, 2) those where recovery was a self-empowering experience, and 3) those where recovery was viewed as a challenge. Individuals fitting the second group, where recovery was a self-empowering experience, and the third group, where recovery was a challenge, both mentioned the importance of work regarding their interactions with other people. For one participant in the second profile of recovery as a self-empowering experience, “work allowed her to interact with people during the daytime instead of isolation”; two other participants stated, “work provided opportunities to improve their social skills, as they wanted to work or worked in a setting that exposed them to more contacts with others” (Provencher, Gregg, Crawford, & Mueser, 2002, p. 139). One participant within the third profile, the self-empowering group, found social meaning in her job, using it as a platform to advocate for others with psychiatric disabilities.

Blank, Harries, and Reynolds (2015), in a qualitative study in which 10 individuals at a mental health day center in the United Kingdom were interviewed about their previous experiences in work, found both positive and negative instances in which work affected individuals' perceptions of belonging. On the one hand, work was found as an important way for individuals to feel that they were integrated with society and to feel validated and valued. As one participant stated, "Work's not just about money, it's...about relationships, it's about place in the community" (Blank, Harries, & Reynolds, 2015, p. 203). While this integration was important for some, other participants spoke of ways in which workplace belonging felt intrusive and unhelpful. One participant described how relationships in his previous job felt suffocating due to their cliquish nature. Another participant described a relationship he had with his former boss:

...the idea of sort of being invaded by the employer and having them sort of supervising your life and the sort of thing is not something I find very attractive at all—and this has happened to me in the past and I don't want it in the future. I like to go in and do my work and go home and that be the end of it. (Blank, Harries, & Reynolds, 2015, p. 204)

Honey (2004) found similar dichotomy between benefits and drawbacks of belonging in the context of employment in a study in which 41 consumers of mental health services in Sydney, Australia were interviewed concerning what was most important about their employment-related beliefs. Similarly, some individuals found that work gave them a better sense of belonging:

We all feel the need to belong. To be part of a society. And if work is the simplest way we do that, we work. Because it's a way of becoming accepted. If you belong to a group

at work, you actually have been accepted by society. It has great social implications.

(Honey, 2004, p. 387)

Again, conversely, this workplace belonging was also described as a drawback if it was intrusive in nature, as one individual described how others would listen to and watch what they were doing and aggressively tell them what to do.

Two studies (14%) viewed belonging objectively by tracking the social networks of their participants. Kukla, Bond, and Xie (2012) used the Social Network Analysis (SNA) (Diman and McCoy, 1998), which measures both the quantity and quality of social networks for individuals with SMI. Using this measure, Kukla, Bond, and Xie (2012) found a significant interaction, though not a main effect, between employment type and social network scores. The steady non-competitive work group showed greater levels of improvement over time than each of the other employment groups: no-work, minimal work, and steady-steady competitive work. Rüesch, Graf, Meyer, Rössler, and Hell (2004) examined individuals involved in inpatient treatment at two large psychiatric hospitals in Zurich, Switzerland. To look at belonging, the researchers used the LUNST scale (an adaptation of the Social Support Questionnaire) (Schaefer, Coyne, & Lazarus, 1981), which assesses perceived social support by different groups of individuals. Controlling for partners, Rüesch, Graf, Meyer, Rössler, and Hell (2004) found a relationship between social support and occupational status: Individuals with competitive employment (which was not operationally defined) have the most frequent regular contact with others, while subjects without any work-like occupations have the smallest social networks.

**Self-Views.** Seven studies (50%) focused on themes concerning how the view of self is impacted by work among the SMI population. The theme was separated into two sub-themes: how work affects identity and personal meaning, and how work affects self-esteem and mastery.

***Identity and Personal Meaning.*** Four studies (29%), coincidentally the only four qualitative studies included in this review, include themes regarding identity and personal meaning. Dunn, Wewiorski, and Rogers (2008) interviewed 23 individuals in the United States recruited via flyer, website brochure, and word of mouth who had experienced psychosis as a part of their psychiatric condition and considered their lives to have been going in a positive direction for over two years. These individuals were asked about their past, their work and work experiences, and what effects their employment played on their recovery. The authors concluded that work played an important part in identity formation for the participants in the study by Dunn, Wewiorski, and Rogers (2008). Many of these individuals had well-established vocational identities and wished to work through their recovery. Participants described themselves as “‘hard workers’ with ‘a strong work ethic’ who talked about being ‘anxious to get back to work’” (Dunn, Wewiorski, & Rogers, 2008, p. 60). Dunn, Wewiorski, and Rogers (2008) also noted how work provided extra meaning for participants involved in helping occupations, and that positions in human services allowed individuals a chance to give back. One participant noted:

I just loved what I was doing...help[ing] other consumers like myself, and it was a place where I can use something that shattered my life and was devastating and somewhat tragic...to my advantage. I could actually help people with the pain that was caused me...to help nurture that...(Dunn, Wewiorski, & Rogers, 2008, p. 61)

Blank, Harries, and Reynolds (2015) took the importance of the role of work in identity conceptualization one step further by noting that occupation *is* identity. One participant stated, “unless you have some kind of occupation, you don’t really exist at all, do you, in society or as an individual? You’re just nobody in a sense, aren’t you?” (Blank, Harries, & Reynolds, 2015, p.

201). Other participants in this study noted how an occupational identity could be used as a “new identity to replace a previous problematic identity” (Blank, Harries, & Reynolds, 2015, p. 202).

The other two studies highlighted the differences participants felt toward identity and the meaning work gives to life. Honey (2004) noted that some participants felt similarly to those in the previously mentioned studies—that without work, an individual doesn’t have identity: “You can often feel that you’re nothing when you’re not [employed]. You know that’s not true, but that’s how a lot of people look at you and that’s how...you often feel” (p. 387). Again, similarly, work is often viewed as a purposeful and meaningful activity: “It’s like the satisfaction of actually doing something during the day...and then coming home after work and like, feeling pretty good that you’ve had a constructive sort of day” (Honey, 2004, p. 387).

However, Honey (2004) notes that for some, these views are not accurate—that some feel one job is no different than any other they’ve held, and that work overall is not meaningful: “I look at the clock all day...you’re wishing your life away aren’t you?” (Honey, 2004, p. 387). Provencher, Gregg, Crawford, and Mueser (2002) separated these differences in perception into their three recovery profiles. Those in the first profile, recovery is uncertain, viewed work as just a way to pass time. Those in the second profile, recovery is a self-empowering experience, viewed work as that means of self-empowerment. Finally, those in the third profile, recovery is a challenging experience, viewed work as a means of self-actualization and as something that gave their life meaning.

***Self-Esteem and Mastery.*** Three studies (21%) discussed the effect working had on self-esteem. Two of the quantitative studies (Bond et al. 2001; Mueser et al. 1997) used the Rosenberg Self-Esteem Scale (Rosenberg, 1965) to measure the effect of work on self-esteem.

This scale is a 10-item self-report measure that gauges global self-worth and is one of the most widely used self-esteem measures (Bond et al., 2001). Both Bond et al. (2001) and Mueser et al. (1997) found a connection between work and self-esteem. Bond et al. (2001) found that self-esteem improved for participants between baseline and 18 months for their competitive work group (defined as “regular community jobs, in integrated settings...paying at least minimum wage”), while there was little net change for their no work, minimal work, and sheltered work groups (p.491). Mueser et al. (1997) found that their participants who obtained competitive employment while in a vocational program tended to have higher self-esteem. One qualitative study addressed self-esteem. Dun, Wewiorski, and Rogers (2008) found that work enhanced self-esteem as, at work, participants felt “needed, valued, and appreciated and received affirmations not easily acquired elsewhere” (p. 61).

Two studies (14%) examined self-mastery, or to what extent people see themselves as being in control of the forces that affect their lives. Eklund, Hansson, & Ahlqvist (2004) used the Mastery Instrument (Pearlin, Menaghan, Lieberman, & Mullan, 1981), a seven-item scale with four levels of self-rated mastery, but did not find a statistically significant link between work and mastery. Provencher, Gregg, Crawford, & Mueser (2002) discussed mastery in terms of three recovery profiles. Those in the first profile, recovery is uncertain, described a low sense of empowerment in general. Those in the second profile, where recovery is viewed as self-empowering, described having a sense of building empowerment, where work increased feelings of self-efficacy. Those in the third profile, where recovery is viewed as a challenge, already felt empowered, were aware of the relationship between their self within the environment, and in general felt satisfied with work and the problem-solving skills it helped supply.

**Outlook on Life.** Twelve of the studies (86%) involve themes concerning how outlook on life was affected by work in those with SMI. These were separated into two sub-themes: how work affects satisfaction (besides just satisfaction of finances and of the workplace) and how work affects one's views toward both recovery and the future in general.

**Satisfaction.** Five different measures were used to measure satisfaction among the nine studies (64%) that looked at how work affected this aspect of quality of life. Four studies used the above described Lehman's QOLI (Lehman, 1996), which measures satisfaction on eight life domains. Fabian (1992) looked at individuals involved in two different supported employment programs, one in Baltimore, MD and one in Washington, DC. Of the 110 individuals interviewed, 56 were individuals who were not yet employed and 54 individuals were in supported employment jobs. Additionally, 10 individuals who maintained the same position over a period of 12 months were interviewed as both a pretest and posttest. Fabian (1992) found that the supported employment group had significantly higher global satisfaction scores, but did not have significant differences for other aspects of life, such as the social or leisure activity scales.

Vanden Boom and Lustig (1997) examined the impact of employment for individuals at a community support program in Madison, WI that emphasizes the importance of employment for rehabilitation. Researchers interviewed two groups of individuals, those currently unemployed and those who worked over 20 hours a week, with the QOLI to measure life satisfaction. Vanden Boom and Lustig (1997) found small effect sizes between the groups for satisfaction with safety and daily activity; medium effect sizes for satisfaction with family, health, and social relations; and a large effect size for global quality of life. However, none of these comparisons were statistically significant.

Kukla, Bond, and Xie (2012) and Mueser et al. (1997) also examined satisfaction using the QOLI. Neither group found statistically significant differences regarding satisfaction.

Kukla, Bond, and Xie (2012) noted specifically no differences between work groups for global satisfaction or satisfaction with leisure activities were found. Mueser et al. (1997) noted specifically no differences were found between work groups for overall life satisfaction.

Two studies used the other two measures described above, the LQLP (Gaite et al., 2000) and the MANSA (Björkman & Svensson, 2005). Browne (1999), in a second “naturalistic” study separate from the above described, compared satisfaction between employed individuals participating in a supported employment program and an occupational therapy program in Ireland using the LQLP. Browne (1999) found that employed individuals in the supported employment program had significantly higher satisfaction related to social relations, but that there were no significant differences between groups for satisfaction regarding leisure, living situation, legal and safety, family relations, religion, or health. Eklund, Hansson, and Ahlqvist (2004) used the MANSA for their measurements regarding satisfaction. Eklund, Hansson, and Ahlqvist (2004) found no significant difference between their working, occupied, or not-working groups regarding satisfaction of leisure activities, domestic tasks, or personal care.

Three studies used measures that were not described above. Hoffmann, Jäckel, Glauser, Mueser, and Kupper (2014) used the Wisconsin Quality of Life Index (Becker, Diamond, & Sainfort, 1993), which examines nine domains of quality of life similar to other measures, but differs in that it is designed to be self-administered and easier to use than other measures. Using this scale, Hoffmann, Jäckel, Glauser, Mueser, and Kupper (2014) described satisfaction as being “somewhat better” for the supported employment group over the traditional vocational rehabilitation group, but stated that these differences were not statistically different (p. 1187).



Two studies used the German version of the WHOQOL-BREF (WHOQOL-Group, 1998). This short version of the original WHOQOL only examines four quality of life domains: satisfaction with physical health, psychological well-being, social relationships, and environments. Rüesch, Graf, Meyer, Rössler, and Hell (2004) found that work positively affected satisfaction in the domains of physical well-being, social relationships, and environment, even when controlling for illness variables. They did not find a relationship within the psychological well-being domain. Watzke, Galvao, and Brieger (2008) used only the psychological well-being domain of the WHOQOL-BREF and found that there was a significant group effect between their working rehabilitation group and their control group.

***Recovery/Vision of the Future.*** One of the studies, Dunn, Wewiorski, and Rogers (2008), discussed how work affected participants' feelings towards recovery. Participants noted work helped them cope, and that in particular the daily routines helped to stabilize their lives. One participant noted how work functioned as a distraction: "You know what helps me...when I'm working?...I don't...think about my illness. I think...[about] just getting my job done and going home" (Dunn, Wewiorski, & Rogers, 2008, p. 61). Dunn, Wewiorski, and Rogers (2008) also noted that specifically those in helping occupations were forced to self-examine, which helped to promote recovery, one such participant noting "I was coming out of a totally isolated state...to reclaim my life...I am really grateful for my work and I love being able to help other people" (p. 61).

Two studies (14%) addressed how participants felt about work and their future. Honey (2004) noted the dichotomy between those who were hopeful ("I think it does give you a lot...it's going to help you isn't it, in the long run.") and those who felt less hopeful ("When you've been out of work a while...it's harder the second time around than doing it all the time.")

(p.387). Provencher, Gregg, Crawford, and Mueser (2002) noted similar differences between their three profiles, with the uncertain profile fearing to work due to losing their benefits and hoping to find meaning elsewhere; the self-empowering profile feeling hopeful to either keep their job or to find other ways to “work” without a job; and the recovery as a challenge profile being aware of future challenges to their work.

### **Discussion**

The purpose of this systematic literature review was to identify what quality of life outcomes employment gives to individuals with SMI. Fourteen articles were identified and included in this systematic literature review after meeting inclusion and exclusion criteria in addition to a quality assessment. Through a review of the 14 articles, non-vocational quality of life outcomes that were measured in relation to employment were identified. These quality of life outcomes were categorized into four themes: health and functioning, interpersonal quality of life, self-views, and outlook on life.

Seven articles examined outcomes related to the first theme of health and functioning. The most commonly used indicator of health and functioning inspected was symptomology of the participants. Six of the studies (Bond et al., 2001; Browne, 1999; Hoffmann, Jäckel, Glauser, Mueser, & Kupper, 2014; Kukla, Bond, & Xie, 2012; Mueser et al., 1997; Watzke, Galvao, & Brieger, 2008) found some aspect of improvement among working participants. One study (Eklund, Hansson, & Ahlqvist, 2004) did not find a significant difference in symptoms. Two studies (Mueser et al., 1997; Watzke, Galvao, & Brieger, 2008) suggested that work can also improve general functioning, as they found significant improvements among their participants. Only one study (Eklund, Hansson, & Ahlqvist, 2004) examined work’s impact on general health and did not find a connection. These findings suggest that work generally relates to an

improvement of aspects of health, namely symptomology and general functioning, though it does not appear to improve health as a whole.

Five articles examined outcomes related to the second theme of interpersonal quality of life. Two quantitative studies (Kukla, Bond, & Xie, 2012; Rüesch, Graf, Meyer, Rössler, & Hell, 2004) found connections between work and size of social networks. Given the importance social networks play in providing both physical and emotional support for individuals, this appears to be an important quality of life aspect. Three qualitative studies (Blank, Harries, & Reynolds, 2015; Honey, 2004; Provencher, Gregg, Crawford, & Mueser, 2002) noted the dual nature work played regarding interpersonal relationships. On the one hand, work was able to provide a way for participants to feel included in the world, to feel that they are part of the rest of society, or to have an avenue to practice social skills. On the other hand, work was noted by some participants as a source for unwanted interpersonal interactions such as the formation of cliques, unwanted intrusion into their lives, and being told by others what to do.

Seven articles discussed outcomes related to the third theme of self-views. Two studies (Blank, Harries, & Reynolds, 2015; Dunn, Wewiorski, & Rogers, 2008) noted how important work was in the formation of identity, even overtly implying that individuals are non-persons without work, whether paid or unpaid. Attention was brought to how often individuals are described using vocational language. Another two studies (Honey, 2004; Provencher, Gregg, Crawford, & Mueser, 2002) emphasized how participants had differing opinions toward work and the formation of identity. Some participants perceived work as a way they were able to gain meaning out of life, while others felt work was only something to pass time in the day. Two studies (Eklund, Hansson, & Ahlqvist, 2004; Provencher, Gregg, Crawford, & Mueser, 2002) examined how work affected feelings of mastery. While Eklund, Hansson, and Ahlqvist (2004)

did not find a connection between work and feelings of mastery, Provencher, Gregg, Crawford, and Mueser (2002) noted again that their participants had differing opinions, some experiencing mastery in conjunction with work and others not experiencing this. Four studies (Bond et al., 2001; Dunn, Wewiorski, & Rogers, 2008; Honey, 2004; Mueser et al., 1997) examined self-esteem, generally finding that work was related to higher self-esteem.

Eleven articles looked at how work affected their participants' outlook on life. Results were fairly mixed regarding work having a connection to satisfaction with life. Five studies (Eklund, Hansson, & Ahlqvist, 2004; Hoffmann, Jäckel, Glauser, Mueser, & Kupper, 2014; Kukla, Bond, & Xie, 2012; Mueser et al., 1997; Vanden Boom & Lustig, 1997) found no statistically significant connection between work and satisfaction. Three studies (Browne, 1999; Fabian, 1992; Rüesch, Graf, Meyer, Rössler, & Hell, 2004) found that there was a statistically significant connection between work and some aspect of measured satisfaction. Only one study (Watzke, Galvao, & Brieger, 2008) found a statistically significant positive relationship between work and its measure of satisfaction, but this was likely due to the study only measuring one aspect of life satisfaction. That there are so many different results relating to satisfaction implies that this particular aspect of quality of life may be particularly difficult to generalize. Two articles explored the role of work in participants' opinions of their recovery. Again, within this theme, results between studies were not consistent. One study (Dunn, Wewiorski, & Rogers, 2008) noted how work helped participants cope, and that this in turn helped stabilize their lives. Dunn, Wewiorski, and Rogers (2008) noted in particular the role work played for those in helping occupations toward the promotion of their own recovery. Another study (Hoffmann, Jäckel, Glauser, Mueser, & Kupper, 2014) did not find any connection between work and their participants' attitudes toward recovery. Two studies (Honey, 2004; Provencher, Gregg,

Crawford, & Mueser, 2002) noted the differences in their participants' opinions regarding work and their future, with some participants stating work helps to prepare you well for the future and feeling generally hopeful, and others noting the difficulty of work and generally being pessimistic about their future.

The results of this systematic review suggest an interesting interplay between particular aspects of quality of life. The literature suggests work generally has a positive effect on several categories of quality of life including symptomology, overall function, sense of belonging, and self-esteem. Tying these categories together is the self-perception of satisfaction, which did not have as cohesive of a trend between studies. This may suggest that while individuals may be gaining objective quality of life benefits from work, they may not be subjectively experiencing said benefits as consistently.

Additionally, three studies in this review hammer in the importance of recognizing differences in individuals' perceptions. Blank, Harries, and Reynolds (2015) note differences in their participants' opinions specifically regarding feelings of belonging. Provencher, Gregg, Crawford, and Mueser (2002) were able to categorize these differences into three profiles: those whose recovery was uncertain, those where recovery was a self-empowering experience, and those where recovery was viewed as a challenge. From these three profiles, they were better able to group trends in opinion. Honey (2004) leaned into the implications of the dichotomies of opinions regarding each of the themes, noting how individuals "weigh up" the benefits and drawbacks to employment to determine whether they should seek/maintain employment or should seek/maintain alternatives to employment. Honey (2004) further suggests using the knowledge of this process of measuring benefits to drawbacks as a way to assist individuals with SMI in their decision-making process.

### **Implications for Social Work Practice**

As stated previously, in 2014 it was estimated that 9.8 million adults 18 or older in the United States were living with SMI (NIMH, n.d.f.). This represented approximately 4.2% of the population of the United States, or roughly 1 in 20 adults. In 2012, only 17.8% of individuals in the United States with SMI were employed (NAMI, 2014). While the findings of this systematic review highlight quality of life benefits of work for individuals with SMI, millions of Americans with SMI are unemployed each year and are unable to gain from these benefits. The National Association for Social Workers' Code of Ethics principle of Social Justice calls for social workers to advocate for change "particularly with and on behalf of vulnerable... individuals and groups of people," in particular making sure to "ensure access to needed information, services, and resources" (National Association of Social Workers, 2008, Ethical Principles section, para. 3). Due to complexity of symptoms, many individuals with SMI are either unable or find it difficult to self-advocate. It is important, then, for social workers to advocate on behalf of this vulnerable population, helping individuals with SMI who are interested in finding employment to do so.

Many agencies have already established different ways to provide work for individuals with SMI, including sheltered workshops, supported employment programs, and integrated work settings, along with traditional vocational rehabilitation models. Much of the reviewed literature noted the benefits of competitive employment for quality of life over other work models, so emphasis should be put on increasing opportunities of competitive employment. At a macro level, social workers should advocate for funding of these programs. While the programs may be able to connect individuals with SMI with work opportunities, without funding they may have difficulty continuing to do so. Additionally, advocacy for funding of research on the topic of

vocation as a treatment for SMI allows the field to make sure individuals with SMI continue to benefit from working along with finding different, perhaps more efficient, methods of helping this population find work.

### **Limitations**

Although this review provides an overview of quality of life benefits for individuals with SMI who work, there are several limitations that should be noted. First, that this review included research with different types of comparisons of participants, such as work vs. non-work, work from employment programs vs. competitive work vs. non-work, and work from one type of employment program vs. work from other types of employment programs. This was due to a search strategy that attempted to use as broad a definition of employment as possible. However, not limiting inclusion criteria to studies using comparisons of just one type of work, such as just competitive employment, has made making comparisons between articles much more difficult.

Secondly, two of the searches that were part of this review used the search term “Occupations.” This term was problematic, as the results from searches using it included studies concerning occupations other than employment such as volunteer work and hobbies. While these searches did provide some useable results, using another search such as “employment” may have found additional relevant studies.

Thirdly, in order to better compare articles to each other, it may have been helpful to have had a narrower definition of quality of life. The current methodology intentionally left this term as broad as possible so as to allow for as many possible definitions of quality of life as possible. It may have been helpful to narrow the scope of the systematic review to a more easily searched term such as “symptomology,” which may have allowed for more articles concerning particular

aspects of quality of life to be found, in particular if these aspects were examined not strictly through the lens of quality of life.

Finally, it is important to note the difficulty in using the term “competitive employment.” This is a term which has had multiple definitions over time and across continents with parameters including number of hours worked, payrate, and whether or not the work is done in an integrated setting. Given these changes in definitions it is difficult to compare studies with different definitions. This was not something I recognized when I began this research, and perhaps it would have been helpful to try segregate studies about competitive employment by how their definitions were operationalized.

### **Suggestions for Future Research**

One of the first things that emerged from this systematic literature review was the impact work had on physical aspects of quality of life: symptoms and overall functioning. Only one study (Eklund, Hansson, & Ahlqvist, 2004) examined the impact of work on general health. While it did not find a connection between work and health, it also did not find a connection between work and symptoms, contrary to the results of five other studies. Given the limited results on the topic and the contrary nature of the one representative sample, it may be helpful for future research to examine whether there is a connection between work and general health.

Furthermore, while performing this review it was noted that many of the scales and measures used to isolate aspects of quality of life were particularly dated. One, the Rosenberg Self-Esteem Scale, dated back to 1965 while being used in a study from 2001 (Bond et al., 2001). While many of these scales have historically had extensive research regarding their reliability and validity, it may be helpful to again test them for reliability and validity given changes in societal values and language over time. Additionally, it may also be helpful to



develop new and/or update existing scales to accurately capture modern perceptions of these aspects.

In conclusion, that a large population of individuals with SMI are unemployed should be concerning to social workers. Besides the economic benefits of holding a job, this systematic review notes important quality of life benefits for this population as well. While perhaps not being a magic bullet, by utilizing these benefits we can begin to undo the problems that have occurred as a result of deinstitutionalization.

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